

Course Syllabus for Degree in Desing

Name of the subject	Computing II (SOLID WORKS)
Year	2025-2026
Mention	Product
Teaching staff name	Anna Gutérrez
Number of credits ECTS	6
Language of instruction	English

Description of the subject / Objectives

The subject proposes the use of the SolidWorks software in a generic way. The parametric modeling technique based on features enable students to create their projects in a virtual 3D environment, with photorealistic presentation through rendering too, and draw a technical drawing.

Prerequisites established in the Study Plan

Computing I

Necessary prior knowledge

It is important that students knowledge the following concepts:

Basic Geometry
Representation Systems: The dihedral system and axonometric system
The Standardization in Technical Drawing

Competences and Learning Outcomes

1. To recognize the possibilities of the Solidworks software and to achieve fluency in it's use
2. To control the environment, the different tools and the different modules of the program
3. To work on the knowledge in the representation of parts and assemblings, as well as in industrial standardization, basically in the making drawings.
4. To present the product in a photorealistic form, by applying material and appearances.
5. Know to find solutions in the process of each exercise
6. Be able to self-evaluate the results

Content

The implementation of the design process

Sketches: how to make a sketch.

Design pieces: how to create a piece from features.

Features: to understand each type of feature

3D sketches

Basic technical drawing: how to make a drawing of a finished part

Sheet metal

Assembly: mates between different parts

Material application

Exploded view

Advanced technical drawing: how to make a drawing of a set of parts

Annotations

Teaching methodology

The classes are developed in a theoretical and practical way through the model 3D, assembly and technical drawing with different exercises, which difficulty increases progressively.

The accumulated knowledge of different concepts allows the student to reach the end of the course with the ability to carry out a complete project.

The use of the three modules of the software (part, assembly and drawing) will be working throughout the course with some of its most important complements.

There are two types of activities, both of which are obligate:

Exercises that are carried out during class to learn the different tools and procedures of the software.

Homework: individual activities, which are worked outside the classroom.

EVALUATION- Training activities

What is evaluated?

The ability to represent a project is evaluated and, therefore, the control capacity and mastery of the tools offered by the software.

- 3D representation (part and assembling).
- Drawing representation (2D planimetry) and technical rules.
- Rendering

Ordinary and Extraordinary Calls

Evaluation in Ordinary Call (Continuous Evaluation)

Academic performance is assessed as follows:

Weight of continuous assessment activities:

1 triannual exercises: 40%

22 triannual exercises: 35%

Final exercise: 15%

Class attendance and participation: 10%

According to the school's general evaluation regulations, in order to pass the course, all assessable elements must be submitted and must obtain a minimum grade of 4 to be averaged. If any element is not submitted, its grade will be an NP ("no presentado" not submitted) and the final grade for the regular exam period will also be an NP.

If any of the assessable elements do not reach a grade of 4, the final grade for the course will be evaluated as an NA. In both cases, the course cannot be passed during the regular exam period, and the student will have to take the extraordinary examen period according to the following point.

Weight of continuous assessment activities:

SKETCH 1	2%
SKETCH 2	2%
OBJECTS EXTRUSION	3%
VASE	4%
WHEEL	4%
BOAT	3%
MICROSCOPE	6%
TYRE-STOOL	6%
EXAM	10%
DIMENSIONS 1	4%
DIMENSIONS 2	4%
ELEPHANT	4%
CUTLERY	5%
STOOL	5%
PERSONAL OBJECT 3D	7%
PERSONAL OBJECT EXPLO+T.D.	6%
EXAM	15%
BEHAVIOR	10%

100%

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If any of the assessable elements do not reach a grade of 4, the final grade for the course will be evaluated as an NA. In both cases, the course cannot be passed during the regular exam period, and the student will have to take the extraordinary examen period according to the following point.

Evaluation in extraordinary call

Students who do not pass the course in the regular session at the end of the class period may present themselves for the extraordinary recovery session, the dates of which are indicated in the academic calendar.

In extraordinary examinations, the professor will personally decide the assessment method for each student, based on the circumstances that have prevented them from passing the subject in the ordinary examination period. However, two main cases can be identified:

- a. Students who have attended class more or less regularly, for whom the instructor can attest to an acceptable level of engagement with the course material and who have submitted a portion of the required assignment: In this case, the student will need to complete the missing assignments or improve them to pass the course. In the case of written exams, if these have been failed, the student will need to retake them. The instructor may decide to change the content of the assignments to ensure that the student demonstrates a minimum level of knowledge of the course material.

In this case: the student must complete the missing assignments or repeat exercises with less than 4 points. The maximum grade they can achieve will be an 8.

- b. Students who have not attended class or whose attendance has been irregular and who have practically not submitted any assignments during the course and therefore the teacher cannot attest to a minimum follow-up and knowledge of the contents: In this case, in addition to completing the required submission during the course (with modifications to avoid plagiarism or not) and possibly having to do some extraordinary task, the student will have to compulsorily take a level test (written or oral exam, workshop practical test, etc.) to pass the subject.

In this case. The students must submit all the assignments and undergo a theoretical-practical exam to pass the subject. Will not be possible for this people to obtain a maximum grade, therefore, a correction coefficient of 0.9 will be applied in the overall grade

Assignments: 60% + exam: 30% + Class attendance and participation: 10%.

The weighting percentages and minimum grades to be obtained for each assessable element will be defined by the professor in each case. The teacher will inform the affected students about the assessment method in the resit (extraordinary) exam session. It is the students' responsibility to find out by their own means the requirements to be met in this session.

Class attendance and general regulations

Students are obligated to attend classes. Failure to comply with this rule may result in the loss of the right to continuous assessment (regular exam period) for the course.

In this course, the general regulations indicated in the ESDI academic guidelines apply. In particular, regarding class attendance, please note the following:

- The minimum attendance percentage to maintain the right to continuous assessment is 80%. This means that students can have a maximum of 20% unexcused absences.
- In the case of excused absences, even if there are a large number of excused absences, this does not exempt students from having to take the courses and continuous assessment properly. This means that they must submit the tasks required by the teacher and take the scheduled exams.
- When the total number of absences, including excused and unexcused absences, reaches 30%, the student may also lose the right to continuous assessment.
- The teacher will consult with the tutor or academic coordination before taking and communicating the decision to lose the right to continuous assessment for a student.

The punctuality at the start of the classes is important: after 10 minutes from the start of a class, exam, or assignment submission, students will not be allowed to enter the classroom unless they can justify their tardiness with a valid document. Renfe Cercanías delay certificates are not considered valid documents to justify being late. Due to the frequent delays of Renfe, it is necessary to plan trips in advance to allow enough time to arrive to class on time.

Attendance at a class is considered complete if the student attends the entire class from the beginning to the end. Students who leave the class before the end without speaking to and justifying their absence to the instructor will receive an absence for the entire class. Communicating with the instructor does not necessarily mean that the student will not have an absence; this decision is at the discretion of the instructor based on the reason for the student's absence.

The use of technological devices (computers, tablets, mobile devices, etc.) may be restricted or even prohibited by the professor if misuse is evident. Specifically, if they are used in the classroom to perform tasks unrelated to the subject being taught. This rule may be applied individually or collectively.

Sources of information

https://my.solidworks.com/solidworks/guide/SOLIDWORKS_Introduction_EN.pdf

Dibujo en Ingeniería y Comunicación Gráfica. Editorial McGraw-Hill; 2nd edición (1 Enero 1999).
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Important Note: The content of this course syllabus may be modified during the academic term if the professor deems it necessary, in accordance with the development of the course and the needs of the group. Any proposed changes will be communicated by the professor in class prior to the publication of the updated syllabus.